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Defending Our Nation. Securing The Future.

(U) History Today - 17 June 2014 - Gene Grabeel

Run Date: 06/17/2014

(U) Former schoolteacher Gene Grabeel was hired in 1943 by one of NSA's predecessors to begin a cryptologic effort against a target that had been neglected during the war. Soon she and an Army officer began looking over the collected traffic: Russian diplomatic cables. Or so they were believed to be. It turned out that there was KGB and GRU (secret police, more or less) traffic among the diplomatic cables.

(U) This was the beginning of the project known today as VENONA.

(U) Grabeel stayed in various leadership roles on the VENONA effort, even though others became more prominent at the phenomenally difficult cryptanalysis involved. The VENONA traffic was a code, which was vulnerable to what we call bookbreaking, but was superenciphered with one-time pads, a series of random numbers rendering the system unbreakable. However, fortunately for the U.S., wartime pressures had caused the Soviets to reuse some one-time pads, making some messages just barely vulnerable to decryption -- "two-time pads" are merely almost unbreakable.

(U) As a result of their efforts on VENONA (among other things, in some cases), people such as Meredith Gardner, Genevieve Grotjan Feinstein, and Richard Leibler were inducted into the Cryptologic Hall of Honor. Another result of those efforts was people like Julius and Ethel Rosenberg, Klaus Fuchs, Alger Hiss, and William Weisband* losing their jobs, or worse.

(U) The only vulnerable traffic was from about 1940 to 1948; as time went on, Grabeel and her cohorts worked increasingly aged traffic, although it remained valuable for many years. She was not the only one who stayed for decades; the work took so long to understand that it did not encourage new people to come in and learn how to do it.

(U) Grabeel retired in 1973, after thirty years on that same target. The VENONA effort was finally halted in 1980, when the amount of return from working the decades-old traffic was no longer deemed worth the effort involved.

(U) The *Cryptologic Almanac* overview of VENONA is here; the Center for Cryptologic History's VENONA Story is also available, as is a three-volume *History of VENONA*.

(U) The photos show Grabeel at the start of her career, and in 1995, when her and her colleagues' work was declassified and announced to an astonished world.

*Or see his Intellipedia entry on Intelink. (U) Discuss historical topics with interesting folks. Visit the Center for Cryptologic History's blog, History Rocks ("go history rocks").

(U) Larger view of photo 1 - Larger view of photo 2

(U) Have a question or comment on "History Today"? Contact us at DL cch or cch@nsa.

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